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United States Department of the Interior

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APR 1989
FWS

Memorandum

To: Director, Fish and Wildlife Service, Washington, D.C.

From: Regional Director, Fish and Wildlife Service, Region 6, Denver, Colorado

Subject: New Administrative 1-Year Finding on a Petition to List the Wasatch Front and West Desert Populations (Utah) of Spotted Frog Under the Endangered Species Act

Region 6 has completed its analysis of the status of the Wasatch Front (Utah) and West Desert (Utah) distinct vertebrate populations of the spotted frog (*Rana luteiventris*), and recommends that the populations are not warranted for listing as threatened or endangered under the Endangered Species Act. A draft Federal Register notice of an administrative finding to this effect is attached. The Region further recommends removing these two distinct vertebrate populations from candidate status.

BACKGROUND

Listing History

A petition dated May 1, 1989, from the Board of Directors of the Utah Nature Study Society was received by the Service on May 4, 1989. The petitioners requested that the Service add the spotted frog (referred to as Rana pretiosa) to the list of threatened and endangered species and to specifically consider the status of the Wasatch, Utah population. The petitioner's stated that, "the spotted frog's present range in the lower 48 states is greatly reduced from its historic range," and that, "the current status [of the species] is greatly reduced from historic times." Threats identified by the petitioners included loss of habitat (caused by dam and reservoir construction, alteration of drainage patterns, urban and agricultural use of water, and highway and bridge construction); impacts as a result of introductions of exotic species; lack of inventories of native wetland animals and insufficient impact analyses conducted prior to development; inadequate

mitigation activities; and Federal and State laws and regulations that do not protect wetlands and riparian areas.

The Service published a notice of a 90-day finding in the Federal Register (54 FR 42529) on October 17, 1990, indicating that there was sufficient information to indicate that the petitioned action may be warranted. Concurrent with publishing the notice, the Service initiated a status review. The period of the status review was prolonged because throughout its wide range there was a lack of quantitative information documenting the spotted frog's current distribution and status.

The Service sponsored an interagency workshop in 1991 to clarify the distribution, taxonomy and current status of the spotted frog. On May 7, 1993, the Service published the 12-month finding on the petition to list the spotted frog (58 FR 27260). In the 12-month finding the Service identified five distinct vertebrate populations of the spotted frog based on climatic and geographic separation and supported by genetic separation as determined by Green (1991) and David Green (McGill University, pers. comm., 1992). The Service found that listing four of these distinct vertebrate populations was warranted but precluded by work on other species having higher priority for listing. These populations included the West Coast spotted frog population (western Washington and Oregon and northeastern California), the Great Basin population (Nevada and southern Idaho), the Wasatch Front population (Utah), and the West Desert population (Utah). In the warranted but precluded finding the Service transferred the four warranted populations from category 2 to category 1 candidate species and assigned the Wasatch Front, Great Basin and West Coast populations a priority 3 listing number and the West Desert population a priority 9 listing number based on the magnitude and imminence of the threats to the populations. The main population of the spotted frog was retained as a category 2 candidate species.

In the November 15, 1994, candidate notice of review, the Service maintained the above priority and candidate category status of four of the five distinct vertebrate populations (59 FR 58982). The listing priority of the West Desert population was increased from a 9 to a 6. In the Services February 28, 1996 candidate notice of review, the Service dropped all but the category 1 candidates from the candidate species list, including the main spotted frog population (61 FR 7596). In the Service's latest notice of review, dated September 19, 1997 (62 FR 49398), the scientific and common name of Utah spotted frog populations and the Great Basin population was changed to Rana luteiventris and Columbia spotted frog, respectively, based on new genetics information (Green et al. 1997). The candidate status and priority numbers were retained with the exception that the Great Basin population was reduced to a priority 9 ranking. The West Coast and main population of spotted frog were retained as Rana pretiosa and renamed the Oregon spotted frog.

The Service has reevaluated the petition and has carefully assessed the best scientific and commercial data available regarding the past, present and future threats faced by the West Desert (Utah) and Wasatch Front (Utah) populations of spotted frog. The Service has, further, taken

into account those efforts being made by the State of Utah to protect the spotted frog, and finds that listing of these two populations is not warranted.

Ecology and Life History

The spotted frog belongs to the family of true frogs, the Ranidae. Adult frogs have large, dark spots on their backs and pigmentation on their abdomens ranging from yellow to red (Turner 1958). Spotted frogs along the Wasatch Front generally possess a salmon color ventrally, while West Desert and Sanpete County, Utah populations generally have a yellow to yellow-orange color ventrally. Spotted frogs in Utah are reported to have fewer and lighter colored spots (Colburn, U.S. Fish and Wildlife Service, pers. comm., 1992) than other populations. The spotted frog is closely associated with water (Dumas 1966, Nussbaum *et al.* 1983) and tends to be more of an aquatic specialist than most ranids. Habitat includes the marshy edges of ponds, lakes, slow-moving cool water streams and springs (Licht 1974; Nussbaum *et al.* 1983; Morris and Tanner 1969; Hovingh 1986).

Spotted frogs emerge from hibernation in the spring and tend to utilize different habitats depending on their needs. In Yellowstone National Park sexually immature individuals tend to inhabit aquatic habitats away from breeding adults until the summer when first, second, and third year male and female age classes and females in the fourth year move back to or near the area from which they emerged from hibernation (Turner 1958). Breeding adults use areas in the absence of the other age classes and move to sites near the younger frogs as the water begins receding from the breeding area (Turner 1958). Often adult frogs disappear after breeding, perhaps burrowing into the substrate. Studies conducted along the Provo River in Utah support this hypothesis (UDWR in prep.). Some researchers have suggested that spotted frogs travel great distances from water after breeding (Stebbins 1985). Turner (1960) suggested that spotted frogs utilize small home ranges. In Yellowstone National Park, frogs were recaptured at or near the same location used for breeding. In Utah studies were initiated in 1997 to better define habitat use and movement of the spotted frog. Preliminary results indicate that spotted frogs in Utah do not move great distances and remain in or near the breeding areas (UDWR, unpubl.).

Breeding occurs early with the spring thaw and although spotted frogs are known to use temporary bodies of water for breeding in more mesic parts of their range (Turner 1960, Licht 1971), In Utah breeding sites are predominantly associated with a spring or some other permanent water source (Morris and Tanner 1969; Hovingh 1993; Ross *et al.* 1993; Ross *et al.* 1994; UDWR, in prep.).

In the West Desert population, spotted frogs begin breeding in early March and continue to the middle of April (Hovingh 1993; UDWR unpubl.). The Wasatch Front population begins breeding in early March as well, however, breeding populations at higher elevations tend to begin breeding toward the end of March and continue through the end of April. Egg deposition is stimulated by a single pair of frogs followed by other spotted frogs depositing eggs in the same area. It has been reported that they will also deposit eggs in the same area annually (Morris and

Tanner 1969; Nussbaum et al. 1983). Individual females may oviposit more than one clutch of eggs annually (Morris and Tanner 1969), however, this has not been confirmed in Utah populations.

Egg masses tend to be deposited in open, shallow (<20 cm) areas and within two meters of the shoreline with water temperatures ranging between 11°C and 20°C (Ross et al. 1993, 1994). Egg masses are weakly adhesive and form an irregular mass or globular cluster approximately 7.5 to 20 cm in diameter. They may become weakly attached to vegetation (*Charra* spp.) for a short period of time when the mass floats to the surface, exposing the top layer of eggs. Wind and water currents often move masses around and they may begin to break up. Eventually the egg masses may become separated and covered with debris. Numbers of eggs per egg mass is quite variable, ranging from 147 to 1160 (Toone 1991). Individual eggs are typically larger than other ranids and can have one or two envelopes. Hatching rate varies directly with water temperature (Toone 1991).

Status

Very little information is available, particularly quantitative information on the historical occurrence of spotted frog in Utah. Information that is available is limited to spotty museum collection records and anecdotal information (Toone 1991), and surveys conducted in the mid-1900's (Tanner 1931; Turner 1960). Based on this information, spotted frog along the Wasatch Front are thought to have historically occurred in the San Pitch River, Spanish Fork River, Utah Lake, Provo River, Jordan River and Upper Weber River drainages. During 1991 and 1992, all historically known locations, as well as other suitable wetlands within its historical range, were surveyed for the occurrence of spotted frog (Ross et al. 1993). Results of this survey indicated that the distribution of spotted frog along the Wasatch Front had declined. Spotted frogs were not found in the Jordan River or the Lower Weber River drainages. Populations were still found in the San Pitch River (Sanpete Valley), Spanish Fork River (Holladay Springs), Utah Lake (near Mona), Provo River (Heber Valley), and in the Upper Weber River (Francis) drainages. Only seven (7) egg masses, however, were observed at one location near Francis in the Upper Weber River. A subsequent survey of this site has not been conducted so the status of this population remains unclear. Though the 1991 and 1992 surveys did not show a significant range reduction, they did indicate that the size of the populations had declined significantly and had become more fragmented because of habitat loss and degradation due to water and urban development. In 1996, a single adult spotted frog was collected in the Lower Weber River drainage (Farmington Canyon), however, subsequent surveys have not found any additional spotted frog at this site. Therefore, the status of a population in the Lower Weber River drainage remains unclear. A survey conducted in 1997 near the town of Springville, south of Provo, Utah, found an additional breeding site with significant numbers of spotted frog.

In the West Desert, spotted frogs have been recorded to occur historically in the Tule Valley, Snake Valley, and Ibapah Valley drainages. Specific areas where spotted frog were recorded included Bishops Springs (Foote Reservoir) and Gandy Salt Marsh in Snake Valley, and spring

systems in the valley floor in Ibapah Valley. Recent surveys indicate that spotted frog distribution has probably remained relatively stable (Toone 1991; Cuellar 1992; Hovingh 1993; Ross et al. 1994). In 1993, the Utah Division of Wildlife Resources conducted a comprehensive survey during the breeding season of all known and potential spotted frog habitat to assess spotted frog distribution, population, and habitat characteristics in the West Desert (Ross et al. 1994). Spotted frog were found to occur in all historical localities in abundant numbers. Specific areas where spotted frog were found included: North and South Tule Spring, Willow Spring, Coyote Spring and the Tule turnoff in Tule Valley; the Leland Harris/Miller Spring complex, Gandy Salt Marsh and the Bishop Spring complex in Snake Valley; and throughout the spring complexes in the valley floor of Ibapah Valley.

Conservation Activities

Shortly after the Service was petitioned to list the spotted frog, the Utah Division of Wildlife Resources began conducting extensive surveys to determine spotted frog distribution in Utah and identify additional populations (Toone 1991; Ross et al. 1993, 1994). Once these surveys were completed and after the Service announced its 12-month petition finding, the Utah Department of Natural Resources began developing a Conservation Agreement for the spotted frog populations in Utah in cooperation with the Bureau of Land Management, Bureau of Reclamation, Utah Reclamation Mitigation and Conservation Commission, Central Utah Water Conservancy District, the Confederated Tribes of the Goshute Federation, the Service, and the scientific community. The goal of this Agreement is to ensure the long term conservation of spotted frog within its historical range in Utah and assist in the development of statewide conservation efforts. Two objectives have been identified as necessary to attain the goal of the Agreement. These are (1) to eliminate or significantly reduce threats to the spotted frog and its habitat to the extent necessary to prevent the danger that populations will become extinct throughout all or a part of their range in Utah, or the likelihood that these populations will become endangered within the foreseeable future throughout all or a part of their range in Utah; and (2) to restore and maintain a sufficient number of populations of spotted frog and the habitat to support these populations throughout its historical range in Utah that will ensure the continued existence of the species.

On November 28, 1997, the Service announced the availability of the Draft Conservation Agreement for the Wasatch Front and West Desert populations (Utah) of spotted frog (*Rana luteiventris*) for review and comment (62 FR 63375). The Service subsequently received a request to extend the comment period, and on December 24, 1997, announced that the comment period on the Draft Conservation Agreement had been extended until January 16, 1998 (62 FR 67398). The Service signed the Conservation Agreement on February 13, 1998. Additionally, the Utah Department of Natural Resources, Utah Reclamation Mitigation and Conservation Commission, Central Utah Water Conservancy District, and the Bureau of Reclamation have all signed the Conservation Agreement to date. The additional two signatures from the Bureau of Land Management and the Confederated Tribes of the Goshute Reservation will be obtained as soon as time permits. Because both parties participated in the development of the Agreement, no problems are anticipated in obtaining their signatures. Furthermore, it should be noted that the

principal author of the petition to list the spotted frog, Peter Hovingh, was a member of the team drafting the Conservation Agreement and supports the document and the significant efforts underway to protect the species (Peter Hovingh, pers. comm. 1997).

Many conservation activities identified in the Conservation Agreement have already been completed, are under way, or are in the planning stages (Table 1). The Conservation Agreement and supporting correspondence provides very detailed information on the threats and conservation activities required to alleviate these threats to the individual spotted frog populations within Utah. This information is too extensive to include in this finding, however, the Conservation Agreement is a supporting document to this finding. Given the development of the Conservation Agreement, the extent of implementation of the Conservation Agreement to date, Federal efforts to protect and conserve the species in Utah, and the time commitments made by the principal action agencies for completion of conservation actions, the Service believes that a mechanism has been put in place that sufficiently protects the Wasatch Front and West Desert populations of spotted frog such that they are not likely to become endangered species within the foreseeable future.

Table 1: Summary of major actions taken and in progress to reduce threats to spotted frog since 1989

| ACTION | TIME PERIOD | |
|-------------------------------|---|---|
| | 1989 - 1992 (Since petition to list) | 1993 - 1997 (Since warranted by FWS) |
| Surveys | <ul style="list-style-type: none"> - 1991, Toone conducted general inventory of House Range Resource Area - 1991, UDWR surveyed all known and potential spotted frog habitat on the Wasatch Front - 1992, UDWR continued surveying all known and potential spotted frog habitat on Wasatch Front | <ul style="list-style-type: none"> - 1993, UDWR surveyed all known spotted frog populations in the West Desert - 1997, UDWR surveyed all known spring complexes in Tule Valley - 1997, UDWR surveyed wetlands at the UDWR Springville Hatchery Facility - 1997, UDWR surveyed spring complexes in Mills Valley - 1997, UDWR surveyed spring complex at Manti Meadows - UDWR and BLM completed aerial photography of all known and potential spotted frog habitat. |
| Studies | <ul style="list-style-type: none"> - 1992, Cuellar conducted an ecological study during the breeding season in Gandy Salt Marsh | <ul style="list-style-type: none"> - 1993, Hovingh conducted a life history study on Tule Valley population - 1994, 1995 1996, 1997, UDWR obtained baseline breeding biology and habitat use data as part of annual monitoring program - 1997, USU initiated population study based on morphometrics - 1997, UDWR conducted habitat use study on Heber Valley population - 1997, UDWR initiated spotted frog movement study on Snake Valley population |
| Genetic Analysis | | <ul style="list-style-type: none"> - 1996, Green conducted a genetic analysis of three Utah spotted frog populations - 1996/1997, USU and UDWR collected samples from all known spotted frog populations for genetic analysis studies - 1997, USU conducted genetic analysis of samples collected |
| Expansion | | <ul style="list-style-type: none"> - 1996, UDWR, FWS, and URMCC conducted feasibility studies at Gandy Warm Springs and Goshen Warm Springs for a native aquatic/warm water species hatchery - 1997, UDWR and URMCC incorporated plans for a native aquatic species hatchery facility at Gandy Warm Springs or Goshen Warm Springs. - In 1998, funding was acquired from the BOR to initiate translocation studies. |
| Habitat Enhancement | <ul style="list-style-type: none"> - 1990, BLM constructed cattle exclosure on part of the Gandy Spring in order to protect occupied springs. - 1992, Congress signed Central Utah Completion Act that included the Utah Lake Wetland Preserve. | <ul style="list-style-type: none"> - 1995, BLM constructed a second cattle exclosure on part of the Gandy Salt Marsh Complex in order to protect occupied springs. - UDWR and URMCC began development of the Utah Lake Wetland Preserve. - UDWR initiated the Jordan River Wetland Project |
| Nonnative Interactions | | <ul style="list-style-type: none"> - 1997, UDWR developed policy for Fish Stocking and Transfer Procedures |

| | | |
|----------------------------|--|--|
| Habitat Acquisition | <p>- 1989, BR acquired 134 acres of wetland habitat as part of mitigation for Jordanelle Reservoir.</p> | <p>- 1995, URMCC acquired 64.7 acres of riverine/riparian habitat along the Provo River between Jordanelle Dam and Deer Creek Reservoir</p> <p>- 1996/1997, URMCC acquired 1500 acres of wetland habitat for the Utah Lake Wetland Preserve.</p> <p>- 1997, URMCC acquired 61.4 acres of riverine/riparian habitat along the Provo River between Jordanelle Dam and Deer Creek Reservoir</p> <p>- URMCC is currently in the process of acquiring an additional 184 acres of riverine and riparian habitat along the Provo River between Jordanelle Dam and Deer Creek Reservoir</p> <p>- URMCC would acquire up to an additional 681 acres of riparian corridor as part of the Provo River Restoration Project Proposed Action. Actions to acquire this property are in progress</p> <p>- 1996, A minimum of 125 cfs has been maintained in the Provo River between Jordanelle Dam and Deer Creek Reservoir.</p> <p>- 1997, draft cooperative agreement has been developed for the acquisition of approximately 100 acres of wetland habitat associated with the American Dream Spring Complex (Mona population).</p> |
| Monitoring | | <p>- 1994, UDWR monitored all Wasatch Front, Snake Valley, and Tule Valley populations</p> <p>- 1994, BLM monitored sections of Tule Valley population</p> <p>- 1995, UDWR monitored all Wasatch Front and Snake Valley populations</p> <p>- 1995, BLM monitored sections of Tule Valley population</p> <p>- 1996, UDWR monitored all Wasatch Front and Snake Valley populations</p> <p>- 1996, BLM monitored sections of Tule Valley population</p> <p>- 1997, UDWR monitored all Wasatch Front, Snake Valley, Tule Valley, and Ibapah Valley populations.</p> |
| Protection | <p>- 1989, UDWR proclamation prohibited collection of spotted frog for zoological use</p> <p>- Spotted frog was included on State Sensitive Species List</p> | <p>- 1997, UDWR developed policy for Fish Stocking and Transfer Procedures</p> |

SUMMARY OF FACTORS AFFECTING THE SPECIES

Analysis of Threats

Pursuant to the Endangered Species Act of 1973, as amended (Act), the Service shall make listing determinations after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State to protect such species. Section 4(a)(1) of the Act (16 U.S.C. 1531 *et seq.*) and regulations (50 CFR part 424) promulgated to implement the listing provisions of the Act set forth the procedures for adding species to or deleting species from the Federal lists. A species may be added or removed from the list of endangered species based upon one or more of the five factors described in section 4(a)(1) of the Act. These five listing criteria are as follows:

A. The present or threatened destruction, modification, or curtailment of its habitat or range. The Services' warranted but precluded finding identified that habitat loss and modification from reservoir construction and from urban and agricultural developments, was a primary cause of the decline in the Wasatch Front population (Dennis Shirley, pers. comm., 1992). The petition finding further identified that, while less habitat loss has occurred with the West Desert population of Utah than with the other southern and western populations, habitat availability is limited. Degradation of spring habitats and water quality from cattle grazing and other agricultural activities in these limited habitats were identified as potential threats to the spotted frog of the West Desert population (Hovingh 1986; Peter Hovingh, pers. comm., 1992; Dennis Shirley, pers. comm., 1992).

Actions taken to date to alleviate the threat of habitat loss to the species, as well as those actions identified in the Conservation Agreement, have focused on both habitat enhancement and maintenance as well as habitat protection. Since the Service's 1993 warranted finding numerous habitat enhancement, maintenance and protection activities have occurred. These include: construction of a cattle enclosure on part of the Gandy Salt Marsh Complex to protect occupied springs; communications with a private land owner to install cattle enclosures at two additional spring sites in the West Desert; acquisition of 126.1 acres of riverine/riparian habitat by URMCC along the Provo River between Jordanelle Dam and Deer Creek Reservoir as part of the environmental mitigation of the Central Utah Project; acquisition by the URMCC of an additional 184 acres of river corridor is currently in progress as part of the environmental mitigation for the Central Utah Project; acquisition of another 681 acres of riparian corridor is being pursued by the URMCC between Jordanelle Dam and Deer Creek Reservoir; minimum flows of 50 cfs were maintained in the Provo River between Jordanelle Dam and Deer Creek Reservoir from 1993 through July, 1996 in an interim agreement; a minimum of 125 cfs has been maintained in the Provo River between Jordanelle Dam and Deer Creek Reservoir since 1996; a draft cooperative agreement has been developed for the acquisition of approximately 100 acres of spotted frog occupied wetland habitat to protect the Mona population and; year long water has been provided to the Jordanelle mitigation ponds to provide habitat for over wintering spotted frogs.

Future habitat enhancement, maintenance, and protection projects will focus on those specific factors that have contributed to habitat degradation and loss including agricultural activities, water development, and urban development. Conservation easements and acquisition of occupied habitats will be pursued. Grazing management programs will be implemented on Federal lands to protect spotted frog habitat. Additional habitat protection, in the form of fencing projects, from grazing impacts on private lands will be pursued. Mitigation for acceptable future projects in occupied habitat will be pursued and based on recommendations of the Spotted Frog Technical Advisory Team.

The Service acknowledges that the viability of some small isolated populations of spotted frog along the Wasatch Front may be questionable based on their fragmentation and small size and that these populations may not be sustainable over the long term. However, we believe that conservation actions underway and planned will prevent extirpation of these populations to the greatest extent possible and that the larger populations along the Wasatch Front are sustainable and can be expanded. The Service further believes that through habitat acquisition, habitat enhancement, range expansion and nonnative control activities, population numbers and sizes of spotted frog along the Wasatch Front will increase to long term sustainable levels and that the threats to the species continued existence have and will continue to decline.

B. Over utilization for commercial, recreational, scientific or educational purposes. Over utilization is not reported as a factor in the decline of the spotted frog. However, the spotted frog has been placed on the State of Utah sensitive species list and regulations limiting collection of the species to permitted individuals are in place.

C. Disease or predation. The introduction of nonnative species into spotted frog habitat has been identified as a factor in the decline of the species. The Conservation Agreement specifically identifies selective control of nonnative species as a required conservation action. Management and control of nonnative species will focus on stocking and introduction procedures as well as control and/or eradication of nonnative species. The State of Utah has developed a policy for fish stocking and transfer procedures which specifically protects native species. Control and eradication of nonnative species will be determined on a case by case basis. Disease or incidence of parasitism has not been identified as a problem in Utah spotted frog populations.

D. Inadequacy of existing regulatory mechanisms. The spotted frog is listed as a sensitive species by the State of Utah. Regulations prohibit direct take of the species and limit collections for scientific, recreational and educational purposes. Additionally, the State's new policy for fish stocking and transfer procedures protects the species from additional threats related to nonnative species. Although land ownership of occupied spotted frog habitat is divided and administered among Federal and State agencies, and private landowners, cooperation among the various groups is helping to protect the spotted frog. Sensitive spotted frog habitat areas are being acquired to ensure future protection and, as new habitat becomes available for spotted frog, it is anticipated that additional regulatory mechanisms will be established to limit access to sensitive spotted frog habitat areas.

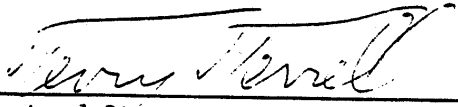
The Conservation Agreement is a multi-agency agreement whose signatories and participants include the Utah Division of Wildlife Resources, Bureau of Land Management, Bureau of reclamation, Utah Reclamation Mitigation and Conservation Commission, Confederated Tribes of the Goshute Reservation, Central Utah Water Conservancy District, and the Service. The Agreement was developed to expedite implementation of conservation measures for spotted frog in Utah as a collaborative and cooperative effort among resource agencies and private landowners to ensure the long-term conservation of spotted frog within its historical range and assist in the development of statewide conservation efforts. The Agreement focuses on two objectives: (1) to eliminate or significantly reduce threats to the spotted frog and its habitat to the extent necessary to prevent the danger that populations will become extinct throughout all or a part of their range in Utah, or the likelihood that these populations will become endangered within the foreseeable future throughout all or a part of their range in Utah; and (2) to restore and maintain a sufficient number of populations of spotted frog and the habitat to support these populations throughout its historical range in Utah that will ensure the continued existence of the species. These objectives will be met through achievement of the following conservation actions: determine baseline spotted frog distribution and available habitat; determine baseline spotted frog population, life history and habitat needs; determine and maintain genetic composition and integrity; augment or expand spotted frog populations and distribution within the historical range; enhance and maintain habitat; selectively control nonnative species; protect and provide habitat for spotted frog; monitor populations and habitat; develop mitigation protocols for proposed development projects and future habitat alteration, where needed; and protect spotted frog populations through the use of regulatory mechanisms. The Agreement sets in place a mechanism for the recovery of the spotted frog by establishing a framework for interagency cooperation and coordination on conservation efforts and setting recovery priorities. In addition to the Agreement, other partnerships have and will be developed on specific actions within the spotted frog range involving other interested agencies or groups.

E. Other scientific or human caused factors affecting its continued existence. The fragmented nature of many of the spotted frog populations leaves them vulnerable to the effects of stochastic events which could result in localized extirpation of populations. Natural recolonization of these populations would be unlikely. The Conservation Agreement specifies augmentation and expansion of spotted frog populations and distribution as a conservation action which will alleviate this threat to the maximum extent possible. The Bureau of Reclamation has funded a translocation study of spotted frogs in Utah as a necessary first step to successfully augment and expand spotted frog populations

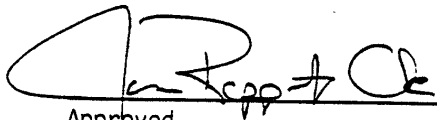
An additional human induced factor potentially threatening spotted frogs is a proposed mosquito abatement program for Juab County. The BLM has rejected the County's request to implement a mosquito control spraying operation in marsh and spring areas on BLM administered lands. The rejection does not prevent the County from spraying on private lands. Eliminating mosquito larvae, a food source of spotted frogs, could result in further declines of the species. Initial discussions have occurred between the County and the Utah Division of Wildlife Resources to protect occupied spotted frogs habitats from this threat.

FINDING

Section 4(b)(1)(A) of the Act provides that the Secretary of Interior shall make listing decisions solely on the basis of the best scientific and commercial data available after conducting a review of the status of the species and after taking into account those efforts, if any, being made by any State or foreign nation, to protect such species. The Service has considered the current status of the Wasatch Front and West Desert populations, including evaluating the five listing factors discussed above, and has taken into account those efforts being made to protect the species including development of the Conservation Agreement, the extent of implementation of the Conservation Agreement to date, Federal efforts to protect and conserve the species, and the time commitments made by the principal action agencies for completion of conservation actions. The Service believes that a mechanism has been put in place that sufficiently protects the Wasatch Front and West Desert populations of spotted frog and that ongoing actions, including those identified in the Conservation Agreement, have substantially reduced threats to the spotted frog populations in Utah such that they will not become endangered within the foreseeable future and therefore, no longer warrant listing pursuant to the Act. Furthermore, because the definition of a candidate species, one for which the Service has on file sufficient information on biological vulnerability and threats to support issuance of a proposed rule, no longer applies to the West Desert and Wasatch Front populations of spotted frog, the Service recommends that these two populations be removed from the Service's candidate species list.



Regional Director



Approved Date 3/27/98

Director, Fish and Wildlife Service

Disapproved Date

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